

Serial No. 10/069,732

ASA-1074

Amendment & RCE filed July 13, 2007

Response to Final Office Action mailed February 13, 2007

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application.

LISTING OF CLAIMS:

1-13. Cancelled

14. (New) An information recording/reproducing apparatus for recording information by forming an information pit determined by a magnetic domain on a track in a magnetic recording disk, said information pit being formed by applying a magnetic recording field and heating a certain portion of the track, comprising:

means for heating the information pit on the track;

a magnetic flux detecting means for sensing the information pit on the track;

a swing arm for holding and positioning the magnetic head to a desired portion on the track;

wherein a tracking position of the magnetic flux detecting means to the track is controlled according to a radial position on the recording disk, so that a longitudinal direction of magnetic flux detecting means is coincident with an orientation of a direction of an outline of the information pit at the tracking position.

15. (New) An information recording/reproducing apparatus according to claim 14, wherein said tracking position is shifted from a center of the track according to the radial position of the disk.

Serial No. 10/069,732

ASA-1074

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16. (New) An information recording/reproducing apparatus according to claim 15,

wherein said tracking position is shifted to an inner side from the center of the track at an inner half area of the disk, and

said tracking position is shifted to an outer side from the center of the track at an outer half area of the disk.

17. (New) An information recording/reproducing apparatus according to claim 14, further comprising:

a linear motor arranged over the disk for holding the means for heating the information pit.

18. (New) An information recording/reproducing apparatus for recording information by forming an information pit determined by a magnetic domain on a track in a magnetic recording disk, said information pit being formed by applying a magnetic recording field and heating a certain portion of the track, comprising:

means for heating the information pit by generating a heated area on the track;

a magnetic head for applying the magnetic field to the information pit and for sensing the information pit on the track;

a swing arm for holding and positioning the magnetic head to desired portions on the track; and

said magnetic head including a magnetic flux detecting means,

wherein an orientation of a shape of the heated area with respect to the track is

Serial No. 10/069,732

ASA-1074

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controlled according to a radial position on the disk so that the orientation is coincident with a longitudinal direction of the magnetic flux detecting means according to the track.

19. (New) An information recording/reproducing apparatus according to claim 18, further comprising:

a second swing arm for holding and positioning the means for heating the information pit to a predetermined portion on the track.

20. (New) An information recording/reproducing apparatus according to claim 18, wherein said means for heating the information pit further comprises:

an optical device for forming a light spot on the track.

21. (New) An information recording/reproducing apparatus according to claim 19, wherein a distance between a rotational axis of the swing arm and a rotational axis of the disk and a distance between a rotational axis of the second swing arm and the rotational axis of the disk is substantially the same, and

a distance between the magnetic flux detecting means and the rotational axis of the swing arm and a distance between the means for heating the information pit and the rotational axis of the second swing arm is substantially the same.

22. (New) An information recording/reproducing apparatus according to claim 19, further comprising:

a slider on which is installed the means for heating the information pit, magnetic flux detecting means, and a means for applying the magnetic recording field.

Serial No. 10/069,732

ASA-1074

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23. (New) An information recording/reproducing apparatus for recording information by forming an information pit determined by a magnetic domain on a track in a magnetic recording disk, said information pit being formed by applying a magnetic recording field and heating a certain portion of the track, comprising:

- an optical device for heating the information pit on the track;
- a magnetic read head for sensing the information pit on the track;
- a magnetic write head for applying the magnetic recording field to the track;
- a swing arm for holding and positioning a slider to a predetermined portion on the track;

wherein the optical device, magnetic read head and the magnetic write head are installed on the slider.